```
int main()
{
    int a[5] = {0};
    fun( a );
    cout << a[0];
}
void fun( int b[] )
{
    *b = 5;
}</pre>
```

```
int main()
{
    int a[5] = {0};
    fun( a );
    cout << a[0];
}
void fun( int *b )
{
    *b = 5;
}</pre>
```

```
int main()
{
    int a[5] = {0};
    fun( a );
    cout << a[0];

void fun( int *b )
{
    *b = 5;
}</pre>
int main()
{
    int a[5] = {0};
    int *b = a;
    int *b = 5;
    cout << a[0];
}</pre>
```

```
int main()
{
    int a[5] = {0};
    int *b = a;
    *b = 5;
    cout << a[0];
}</pre>
```

```
int main()
{
    int a[5] = {0};
    int *b;
    b = a;
    *b = 5;
    cout << a[0];
}</pre>
```

```
int main()
                                      int main()
{
                                      {
    int a[4][4] = \{0\};
                                          int a[4][4] = \{0\};
    fun(a);
                                           fun(a);
    cout << a[0][2];
                                           cout << a[0][2];
                                      }
}
void fun( int b[][4] )
                                      void fun( int (*b)[4] )
    b[0][2] = 5;
                                           b[0][2] = 5;
                                      }
```

```
int main()
                                      int main()
{
                                      {
    int a[4][4] = \{0\};
                                          int a[4][4] = \{0\};
    fun(a);
                                           fun(a);
    cout << a[0][2];
                                           cout << a[0][2];
                                      }
}
                                      void fun( int (*b)[4] )
void fun( int b[][4] )
    (*b)[2] = 5;
                                           (*b)[2] = 5;
```

```
int main()
{
    int a[4][4] = {0};
    fun( a );
    cout << a[0][2];
}

void fun( int (*b)[4] )
{
    (*b)[2] = 5;
}

{
    (*b)[2] = 5;
}</pre>
```

```
int main()
{
   int a[4][4] = {0};
   int (*b)[4] = a;
   (*b)[2] = 5;
   cout << a[0][2];
}</pre>
```

```
int main()
{
    int a[4][4] = {0};
    int (*b)[4];
    b = a;
    (*b)[2] = 5;
    cout << a[0][2];
}</pre>
```

```
0012FF40
                               b[0][0]
                                         a[0][0]
               0012FF3C
  b
                               b[0][1]
                                         a[0][1]
                                                       0012FF44
                                                   0
                               b[0][2]
                                         a[0][2]
                                                   0
                                                       0012FF48
                               b[0][3]
                                         a[0][3]
                                                       0012FF4C
                                                   0
                               b[1][0]
                                         a[1][0]
                                                       0012FF50
                                                   0
int main()
                                                       0012FF54
                               b[1][1]
                                         a[1][1]
                                                   0
{
                               b[1][2]
                                                       0012FF58
                                         a[1][2]
                                                   0
   int a[4][4] = \{0\};
                               b[1][3]
                                                       0012FF5C
                                         a[1][3]
                                                   0
   int (*b)[4] = a;
                               b[2][0]
                                         a[2][0]
                                                       0012FF60
                                                   0
   b[0][2] = 2;
   cout << a[0][2];
                               b[2][1]
                                         a[2][1]
                                                   0
                                                       0012FF64
   b++;
                                                       0012FF68
                               b[2][2]
                                         a[2][2]
                                                   0
}
                                         a[2][3]
                               b[2][3]
                                                   0
                                                       0012FF6C
                                         a[3][0]
                               b[3][0]
                                                       0012FF70
                                                   0
b points to array a[0]
                               b[3][1]
                                         a[3][1]
                                                       0012FF74
                                                   0
                               b[3][2]
                                         a[3][2]
                                                       0012FF78
                                                   0
                               b[3][3]
                                                       0012FF7C
                                         a[3][3]
                                                   0
```

	b[0][0]	a[0][0]	0	0012FF40
b 0012FF40 <del>0012FF</del> 3C	b[0][1]	a[0][1]	0	0012FF44
	b[0][2]	a[0][2]	0	0012FF48
	b[0][3]	a[0][3]	0	0012FF4C
	b[1][0]	a[1][0]	0	0012FF50
int main()	b[1][1]	a[1][1]	0	0012FF54
{	b[1][2]	a[1][2]	0	0012FF58
<pre>int a[4][4] = {0}; int (*b)[4] = a;</pre>	b[1][3]	a[1][3]	0	0012FF5C
b[0][2] = 2;	b[2][0]	a[2][0]	0	0012FF60
<pre>cout &lt;&lt; a[0][2]; b++; } b points to array a[0]</pre>	b[2][1]	a[2][1]	0	0012FF64
	b[2][2]	a[2][2]	0	0012FF68
	b[2][3]	a[2][3]	0	0012FF6C
	b[3][0]	a[3][0]	0	0012FF70
	b[3][1]	a[3][1]	0	0012FF74
	b[3][2]	a[3][2]	0	0012FF78
	b[3][3]	a[3][3]	0	0012FF7C

	b[0][0]	a[0][ <del>0]</del>	0	0012FF40
b 0012FF40 <del>0012FF</del> 3C	b[0][1]	a[0][1]	0	0012FF44
	b[0][2]	a[0][2]	2	0012FF48
	b[0][3]	a[0][3]	0	0012FF4C
	b[1][0]	a[1][0]	0	0012FF50
int main()	b[1][1]	a[1][1]	0	0012FF54
{	b[1][2]	a[1][2]	0	0012FF58
<pre>int a[4][4] = {0}; int (*b)[4] = a;</pre>	b[1][3]	a[1][3]	0	0012FF5C
b[0][2] = 2;	b[2][0]	a[2][0]	0	0012FF60
<pre>cout &lt;&lt; a[0][2]; b++; } b points to array a[0]</pre>	b[2][1]	a[2][1]	0	0012FF64
	b[2][2]	a[2][2]	0	0012FF68
	b[2][3]	a[2][3]	0	0012FF6C
	b[3][0]	a[3][0]	0	0012FF70
	b[3][1]	a[3][1]	0	0012FF74
	b[3][2]	a[3][2]	0	0012FF78
	b[3][3]	a[3][3]	0	0012FF7C

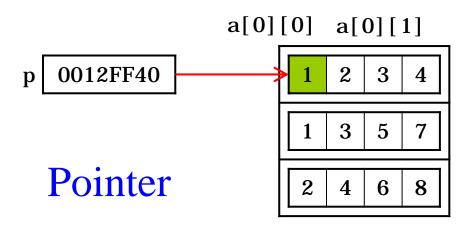
```
0012FF40
                               b[0][0]
                                        a[0][0]
              0012FF3C
     0012FF50
                               b[0][1]
                                        a[0][1]
                                                      0012FF44
                                                   0
                               b[0][2]
                                        a[0][2]
                                                   2
                                                      0012FF48
                               b[0][3] a[0][3]
                                                      0012FF4C
                                                   0
                                         a[1][0]
                               b[1][0]
                                                      0012FF50
                                                   0
int main()
                                                      0012FF54
                               b[1][1]
                                         a[1][1]
                                                   0
                               b[1][2]
                                                      0012FF58
                                        a[1][2]
                                                   0
   int a[4][4] = \{0\};
                               b[1][3]
                                                      0012FF5C
                                        a[1][3]
                                                   0
   int (*b)[4] = a;
                               b[2][0]
                                        a[2][0]
                                                      0012FF60
                                                   0
   b[0][2] = 2;
   cout << a[0][2];
                               b[2][1]
                                        a[2][1]
                                                   0
                                                      0012FF64
   b++;
                                                      0012FF68
                               b[2][2]
                                        a[2][2]
                                                   0
}
                                        a[2][3]
                               b[2][3]
                                                   0
                                                      0012FF6C
                                        a[3][0]
                               b[3][0]
                                                      0012FF70
                                                   0
b points to array a[0]
                               b[3][1]
                                         a[3][1]
                                                      0012FF74
                                                   0
                               b[3][2]
                                         a[3][2]
                                                      0012FF78
                                                   0
                               b[3][3]
                                                      0012FF7C
                                        a[3][3]
                                                   0
```

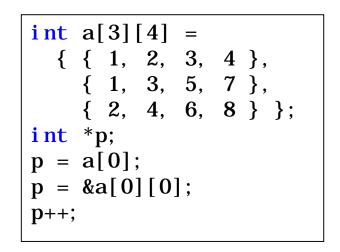
```
0012FF40
                                         a[0][0]
                                         a[0][1]
                                                       0012FF44
                                                    0
                                         a[0][2]
                                                    0
                                                       0012FF48
                                         a[0][3]
                                                       0012FF4C
                                                    0
                                         a[1][0]
                                                       0012FF50
                                                    0
int main()
                                                       0012FF54
                                         a[1][1]
                                                    0
                                         a[1][2]
                                                       0012FF58
                                                    0
   int a[4][4] = \{0\};
                                         a[1][3]
                                                       0012FF5C
   fun(a);
                                                    0
   cout << a[0][2];
                                         a[2][0]
                                                       0012FF60
                                                    0
                                         a[2][1]
                                                    0
                                                       0012FF64
void fun( int (*b)[4] )
                                                       0012FF68
                                         a[2][2]
                                                    0
                                         a[2][3]
                                                    0
                                                       0012FF6C
   b[0][2] = 2;
   b++:
                                         a[3][0]
                                                       0012FF70
                                                    0
                                         a[3][1]
                                                    0
                                                       0012FF74
b points to array a[0]
                                                       0012FF78
                                         a[3][2]
                                                    0
                                                       0012FF7C
                                         a[3][3]
                                                    0
```

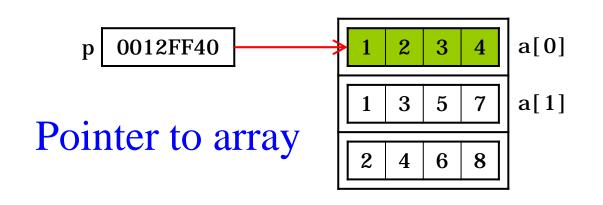
	b[0][0]	a[0][0]>	0	0012FF40
b 0012FF40 <del>0012</del> FF3C	b[0][1]	a[0][1]	0	0012FF44
<u> </u>	b[0][2]	a[0][2]	0	0012FF48
	b[0][3]	a[0][3]	0	0012FF4C
	b[1][0]	a[1][0]	0	0012FF50
<pre>int main()</pre>	b[1][1]	a[1][1]	0	0012FF54
<pre>int a[4][4] = {0}; fun( a ); cout &lt;&lt; a[0][2]; }</pre>	b[1][2]	a[1][2]	0	0012FF58
	b[1][3]	a[1][3]	0	0012FF5C
	b[2][0]	a[2][0]	0	0012FF60
	b[2][1]	a[2][1]	0	0012FF64
<pre>voi d fun( int (*b)[4] ) {</pre>	b[2][2]	a[2][2]	0	0012FF68
b[0][2] = 2; b++; }	b[2][3]	a[2][3]	0	0012FF6C
	b[3][0]	a[3][0]	0	0012FF70
	b[3][1]	a[3][1]	0	0012FF74
b points to array a[0]	b[3][2]	a[3][2]	0	0012FF78
	b[3][3]	a[3][3]	0	0012FF7C

	b[0][0]	a[0][0]>	0	0012FF40
b 0012FF40 <del>0012</del> FF3C	b[0][1]	a[0][1]	0	0012FF44
	b[0][2]	a[0][2]	2	0012FF48
	b[0][3]	a[0][3]	0	0012FF4C
	b[1][0]	a[1][0]	0	0012FF50
<pre>int main()</pre>	b[1][1]	a[1][1]	0	0012FF54
<pre>int a[4][4] = {0}; fun( a ); cout &lt;&lt; a[0][2]; }</pre>	b[1][2]	a[1][2]	0	0012FF58
	b[1][3]	a[1][3]	0	0012FF5C
	b[2][0]	a[2][0]	0	0012FF60
	b[2][1]	a[2][1]	0	0012FF64
<pre>voi d fun( int (*b)[4] ) {</pre>	b[2][2]	a[2][2]	0	0012FF68
b[0][2] = 2; b++; }	b[2][3]	a[2][3]	0	0012FF6C
	b[3][0]	a[3][0]	0	0012FF70
	b[3][1]	a[3][1]	0	0012FF74
b points to array a[0]	b[3][2]	a[3][2]	0	0012FF78
	b[3][3]	a[3][3]	0	0012FF7C

```
0012FF40
                               b[0][0]
                                         a[0][0]
     0012FF50
              0012FF3C
                               b[0][1]
                                         a[0][1]
                                                       0012FF44
                                                   0
                               b[0][2]
                                         a[0][2]
                                                   2
                                                       0012FF48
                               b[0][3] a[0][3]
                                                       0012FF4C
                                                   0
                               b[1][0]
                                         a[1][0]
                                                       0012FF50
                                                   0
int main()
                                                       0012FF54
                               b[1][1]
                                         a[1][1]
                                                   0
                                                       0012FF58
                               b[1][2]
                                         a[1][2]
                                                   0
  int a[4][4] = \{0\};
                                         a[1][3]
                                                       0012FF5C
  fun(a);
                               b[1][3]
                                                   0
  cout << a[0][2];
                               b[2][0]
                                         a[2][0]
                                                       0012FF60
                                                   0
                               b[2][1]
                                         a[2][1]
                                                   0
                                                       0012FF64
void fun( int (*b)[4] )
                                                       0012FF68
                               b[2][2]
                                         a[2][2]
                                                   0
                               b[2][3]
                                         a[2][3]
                                                   0
                                                       0012FF6C
  b[0][2] = 2;
   b++:
                                         a[3][0]
                               b[3][0]
                                                       0012FF70
                                                   0
                               b[3][1]
                                         a[3][1]
                                                       0012FF74
                                                   0
b points to array a[0]
                                         a[3][2]
                               b[3][2]
                                                       0012FF78
                                                   0
                                                      0012FF7C
                               b[3][3]
                                         a[3][3]
                                                   0
```





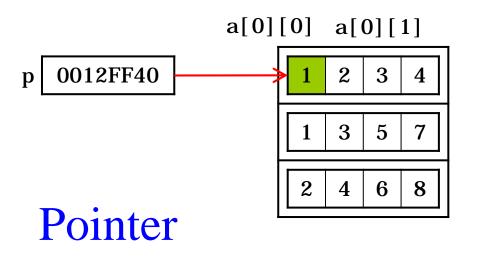


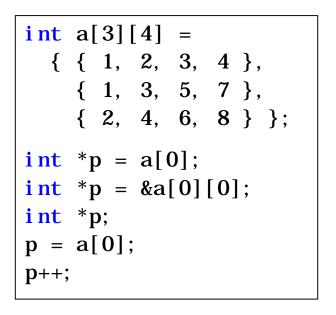
```
int a[3][4] =
    { { 1, 2, 3, 4 },
        { 1, 3, 5, 7 },
        { 2, 4, 6, 8 } };
int (*p)[4];
p = a;
p = &a[0];
p++;
```

```
p 0012FF40 1 2 3 4 a
```

```
int a[4] = { 1, 2, 3, 4 };
int (*p)[4];
p = &a;
```

Pointer to array

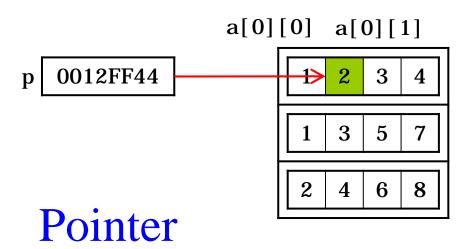




```
Pointer to array
```

```
int a[3][4] =
    { 1, 2, 3, 4 },
        { 1, 3, 5, 7 },
        { 2, 4, 6, 8 } };

int (*p)[4] = a;
int (*p)[4] = &a[0];
int (*p)[4];
p = a;
p++;
```



```
int a[3][4] =
    { 1, 2, 3, 4 },
        { 1, 3, 5, 7 },
        { 2, 4, 6, 8 } };

int *p = a[0];
int *p = &a[0][0];
int *p;
p = a[0];
p++;
```

```
Pointer to array
```

```
int a[3][4] =
    { 1, 2, 3, 4 },
        { 1, 3, 5, 7 },
        { 2, 4, 6, 8 } };

int (*p)[4] = a;
int (*p)[4] = &a[0];
int (*p)[4];
p = a;
p++;
```

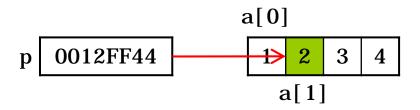
#### **Pointer**

```
int a[4] = { 1, 2, 3, 4 };
int *p = a;
int *p = &a[0];
int *p;
p = a;
p++;
```

```
p 0012FF40 1 2 3 4 a
```

```
int a[4] = { 1, 2, 3, 4 };
int (*p)[4] = &a;
int (*p)[4];
p = &a;
```

#### Pointer to array



#### **Pointer**

```
int a[4] = { 1, 2, 3, 4 };
int *p = a;
int *p = &a[0];
int *p;
p = a;
p++;
```

```
p 0012FF40 1 2 3 4 a
```

```
int a[4] = { 1, 2, 3, 4 };
int (*p)[4] = &a;
int (*p)[4];
p = &a;
```

## Pointer to array

```
int a[4] = \{ 2, 4, 6, 8 \};
    int b = 9:
    int c[3] = \{ 3, 5, 8 \};
    int d[2] = \{ 4, 7 \};
    int *(p[4]) = \{ a, \&b, c, d \};
    int *p[4] = \{ a, \&b, c, d \};
          0012FF58
                                  2
                                            8 a
                                         6
   p[0]
                                      4
          0012FF60
   p[1]
          0012FF6C
                                            8 c
                                         5
   p[2]
          0012FF70
   p[3]
                                 | \mathbf{d} |
        0012FF40
                                   3
                                         7
                                      5
                                  4
Pointer to array
                                         9
```

```
int *(p[4]);
p[0] = a;
p[1] = &b;
p[2] = c;
p[3] = d;
```

# Array of pointers

```
int a[4][4] =
    { 1, 2, 3, 4 },
        { 1, 3, 5, 7 },
        { 2, 4, 6, 8 },
        { 1, 4, 6, 9 } };
int (*p)[4] = a;
int (*p)[4];
p = a;
```

```
int main()
{
   int a[4] = { 2, 4, 6, 8 };
   int b = 9;
   int c[3] = { 3, 5, 8 };
   int d[2] = { 4, 7 };
   int *(p[4]) = { a, &b, c, d };
}
```

```
int main()
{
   int a[4] = \{ 2, 4, 6, 8 \};
   int b = 9;
   int c[3] = \{ 3, 5, 8 \};
   int d[2] = \{ 4, 7 \};
   int *(p[4]);
  p[0] = a;
  p[1] = \&b;
  p[2] = c;
  p[3] = d;
```